

# Illinois Route 176 Corridor

Wauconda, Illinois

Adopted April 1, 2014

Bill Grieve, Amanda Larson, & Dan Brinkman



# **IL Route 176 Corridor – Wauconda**

## **SECTION 1. – EXISTING CONDITIONS**

### **ROADWAY NETWORK**

The Illinois Department of Transportation (IDOT) has classified IL Route 176 and US Route 12, and IL Route 59 south of US 12 as Strategic Regional Arterial (SRA) Routes. An SRA route, as defined by IDOT, is a highway designated to accommodate long-distance regional traffic, to complement a region's major transit and highway facilities, and to supplement the freeway system.

The roadways within the IL 176 corridor are classified according to the character of service they are intended to provide, which is a process known as functional classification. This process recognizes a hierarchy of roadways and the fact that they do not function independently, but rather as a system-wide supportive network. By creating this hierarchy, an orderly system is created helping to give streets different classifications. The intersecting roadways are mostly local roadways with the exception of Brown Street and Barrington Road, which are classified as collector streets.

*Exhibit 1* depicts the functional classification of the roadways within the study area, as defined by IDOT. In addition to those roads and streets, Osage Street serves as a collector route, as it extends throughout the Village north of IL 176.

Roadway jurisdiction is important as to how a roadway functions and is maintained. The roadways within the IL 176 corridor are under the jurisdiction of the Illinois Department of Transportation (IDOT) and the Village of Wauconda. Jurisdiction determines who is responsible for maintenance, snow plowing, roadway improvements, etc. Coordination and cooperation between entities is an important part in determining access control, roadway character, traffic signals etc.

Traffic counts were obtained from GHA's March 2013 counts completed as part of a yearly contract with IDOT. The data included turning movement counts at the ramps to/from US 12 at IL 176, as well as Average Daily Traffic (ADT) counts along IL 176. These turning movement counts are illustrated in *Exhibit 2B*. The ADT along the three major roadways in the study area is illustrated on *Exhibit 2A*. The ADT along US 12 and Barrington Road are from IDOT's 2011 traffic counts, and as previously mentioned, the IL 176 counts are from GHA's 2013 traffic counts

### **ACCIDENT DATA**

*Exhibit 3* summarizes accident data provided by the Village for 2010-2012, and the first half of 2013. The village reports four types of accidents - property damage, personal injury, pedestrian, and fatalities. The location with the highest 3.5 year total is the US 12 and IL 176 intersection. Another notable intersection is the intersection of IL 176 at Brown Street, which has planned IDOT improvements in the next 5 years. These intersections can be analyzed further to determine any potential mitigation strategies.

## **PLANNED ROADWAY IMPROVEMENT PROJECTS**

Planned roadway improvement projects are an important part of a corridor study. The planned roadway improvements along the corridor are listed below:

### **1994 US Route 12 SRA Study**

- Three lanes in each direction with an open 40 median
- Provide auxiliary lane southbound along US 12 between IL 176 and IL 59 to facilitate weaving traffic
- Develop two-way frontage roads along northbound US 12 from Ivanhoe Road to IL 59 and along northbound and southbound US 12 north of Miller Road
- Restrict access to interchanges at IL Route 176 and Illinois 59, remove all local access, construct a cul-de-sac at Slocum Lake Road, and construct a local access road to provide alternate access at the IL 176 southbound entrance ramp
- Restrict Access at Ivanhoe Road, permit right turn in and right turn out only

### **CMAP Transportation Improvement Program (TIP)**

- IL 176 @ Brown Street – install traffic signal
- US 12 From Fish Lake Road to Old Rand Road – resurface

### **IDOT TIP**

- US 12 Bridge deck overlay on Northbound bridge at IL Rte 176 (FY 2014)
- IL 176 from Roberts to US 12 (Rand Road) – resurfacing (FY 2015-2019)
- IL 176 from US 12 to 0.2 Miles East of Hill Top Terrace – resurfacing (FY 2015-2019)
- IL 176 @ Brown Street – traffic signal installation (FY 2015-2019)
- Barrington Road from IL Rte 176 to US 12 – resurfacing (FY 2014-2019)

## **SECTION 2. – FUTURE TRAFFIC PROJECTIONS**

### **YEAR 2040 CMAP TRAFFIC PROJECTIONS AND CAPACITY ANALYSES**

Another important part of a corridor study is to run a capacity analysis on the existing and 2040 projected ADTs, reported as Level of Service (LOS). The Chicago Metropolitan Agency for Planning (CMAP) projected the 2040 average daily traffic numbers for US 12, IL 176, and Barrington Road (See *Exhibit 4*). For reference, the response letter from CMAP can be found in *Appendix I*.

The LOS for links of a roadway is determined based on the type of roadway, cross section, and ADT. A “link” is a section of roadway in between intersections. Level of Service for the roadway links in the study area were determined using a method prepared by the Florida Department of Transportation (and allowed for use by IDOT) in conjunction with the Highway Capacity Manual. For reference, the table used to determine the link LOS is provided in *Appendix II* of this report.

The table determines the LOS based on the type of roadway, number of signalized intersections per mile, number of lanes, ADT, as well as other factors. Adjustments are made to the boundaries within the table based on median presence and turn lanes. The table below summarizes the existing and 2040 LOS for the various roadway segments in the study area.

Road	Segment	No. of Lanes	ADT	2040 ADT	Ex LOS	2040 LOS
IL 176	East of US 12	3	18,010	19,000	F	F
IL 176	West of US 12	3	22,008	26,000	F	F
US 12	North of IL 176	4	30,800	34,000	B	C
US 12	South of 176	4	34,800	40,000	C	D
Barrington Road	South of 176	2	5,850	10,000	B	C
Barrington Road	South of US 12	2	14,200	20,000	D	F

### **FUTURE LAND USE TRIP GENERATIONS AND TRAFFIC PROJECTIONS**

The Village provided detailed future development and redevelopment information for several parcels throughout the study area, which was then divided into four primary subareas. *Exhibit 5* summarizes the projected weekday morning and evening peak hours and daily trip generations for the four subareas, which are based on rate information published by the Institute of Transportation Engineers (ITE). The generations also consider discounts for pass-by and internal trips. These are trips that are made by vehicles already traveling the study area roads and/or that stay internal to the subarea without having to use the major routes. As can be seen in *Exhibit 5*, the pass-by and internal capture trip discounts make up about 40-45% of the total trips.

*Exhibit 6* illustrates the volume of new trips generated in each of the four subareas, which can be added to the existing traffic counts (see *Exhibits 2A and 2B*) to develop future traffic projections for comparison to the CMAP Year 2040 projections. If the Village's future land use projections come to fruition, the volumes along IL 176, US 12, and Barrington Road may be 10-20% higher than CMAP projects. This would lead to even longer delays on the major roads in the study area, and in particular along IL 176, which per the previous chart, is currently and expected to continue to operate at the "worst" LOS F. Thus, it will be very important to develop recommendations throughout the IL 176 corridor study area that promote safe and efficient travel, using strategies such as consolidating access and developing an internal street system that will minimize the traffic impacts on the major routes.

## SECTION 3. - RECOMMENDATIONS

### IMPROVEMENT CONSIDERATIONS

As noted, IDOT has classified IL 176 and US 12 as Strategic Regional Arterial (SRA) routes. By definition, SRA routes focus on moving through traffic, rather than emphasizing property access. For example, along IL 176, "full" access allowing all turning and through movements, should be located at minimum ¼ mile intervals and "limited" access allowing only right turns, should be located at minimum 500 foot intervals. Strategies such as frontage roads and cross access among adjoining parcels are recommended and are often achievable along undeveloped corridors.

It is obvious that the IL 176 Corridor developed over time quite differently. Many smaller parcels, with limited frontage on IL 176 were developed primarily with a mixture of commercial uses that generally focus on service retail oriented businesses that take advantage of the traffic traveling along IL 176. For example, there are 13 streets and/or driveways that intersect the north side of IL 176 between US 12 on the west and Osage Street on the east. If the "pure" SRA guidelines are adhered to, this approximate 1700 foot stretch of IL 176 would only have one full access intersection and 3-4 limited access drives. All other parcels would be encouraged to be served via a frontage road, which would cut significantly into the individual parcels.

As development and redevelopment opportunities are presented to the Village, steps should be taken to incorporate the "spirit" of the SRA guidelines. And per current IDOT policy, a "complete streets" approach should be required by the Village, which will include a sidewalk on one side of IL 176 and a 10 foot wide bicycle / pedestrian path on the other side. This will help the Village's ongoing coordination and cooperation efforts with IDOT to hopefully implement the study area improvements discussed below.

### RECOMMENDED STUDY AREA IMPROVEMENTS

As part of the IL Route 176 Corridor study, several potential network improvements were analyzed to determine their effectiveness. The recommended improvements are illustrated in *Exhibit 7*.

1. Relocate US 12 Northbound exit ramp to align opposite Brown Street, which is planned to have traffic signal control at IL 176.

Discussion. It was hoped that a realigned ramp would assist accessing the largely undeveloped triangular area bounded by IL 176 on the north, US 12 on the southwest, and Barrington Road on the southeast. However, right-of-way (ROW) and grade differences on the south side of IL 176 make this an almost impossible alternative to construct.

2. At-grade intersection potential for the US 12 interchanges with IL 176 and Barrington Road.

Discussion. The IL 176 / US 12 interchange takes up about 25-30 acres of prime developable land. The Village has wondered if the interchange could be converted into an at-grade intersection. *Exhibit 8* illustrates what an at-grade intersection would look like. SRA access guidelines were followed and the number of through travel lanes provided and turn lane stacking distances were based on the CMAP 2040 and Village study area trip generations.

Basically, US 12 would have three through lanes, dual left turn lanes, and a separate right turn lane in both directions within a minimum 200 foot ROW. And IL 176 would two through lanes, dual left turn lanes, and a separate right turn lane in both directions within a minimum 120 foot ROW. Along IL 176, parcel access would be limited to just right turns at least 600 feet west of US 12 and to Brown Street to the east. Finally, the converting the interchange to an at-grade intersection could be cost prohibitive, with preliminary estimates in excess of \$30,000,000, none of which would be contributed to by IDOT.

3. Develop a preliminary street network within the study area and in particular the triangle area bounded by IL 176, US 12, and Barrington Road.

Discussion. As noted in the future traffic projection text, developing a well-defined internal street network will help minimize the traffic impacts on IL 176, by distributing trips efficiently along the corridor and by encouraging internal trips among the land uses.

4. New traffic signals on IL 176 at Anderson Road, Brown Street, Osage Street, and Church Street where Barrington Road would be rerouted.
5. Remove the loop ramp from Barrington Road and create new signalized intersections with Osage Street extended and US 12 about 2000 feet southeast of Barrington Road.

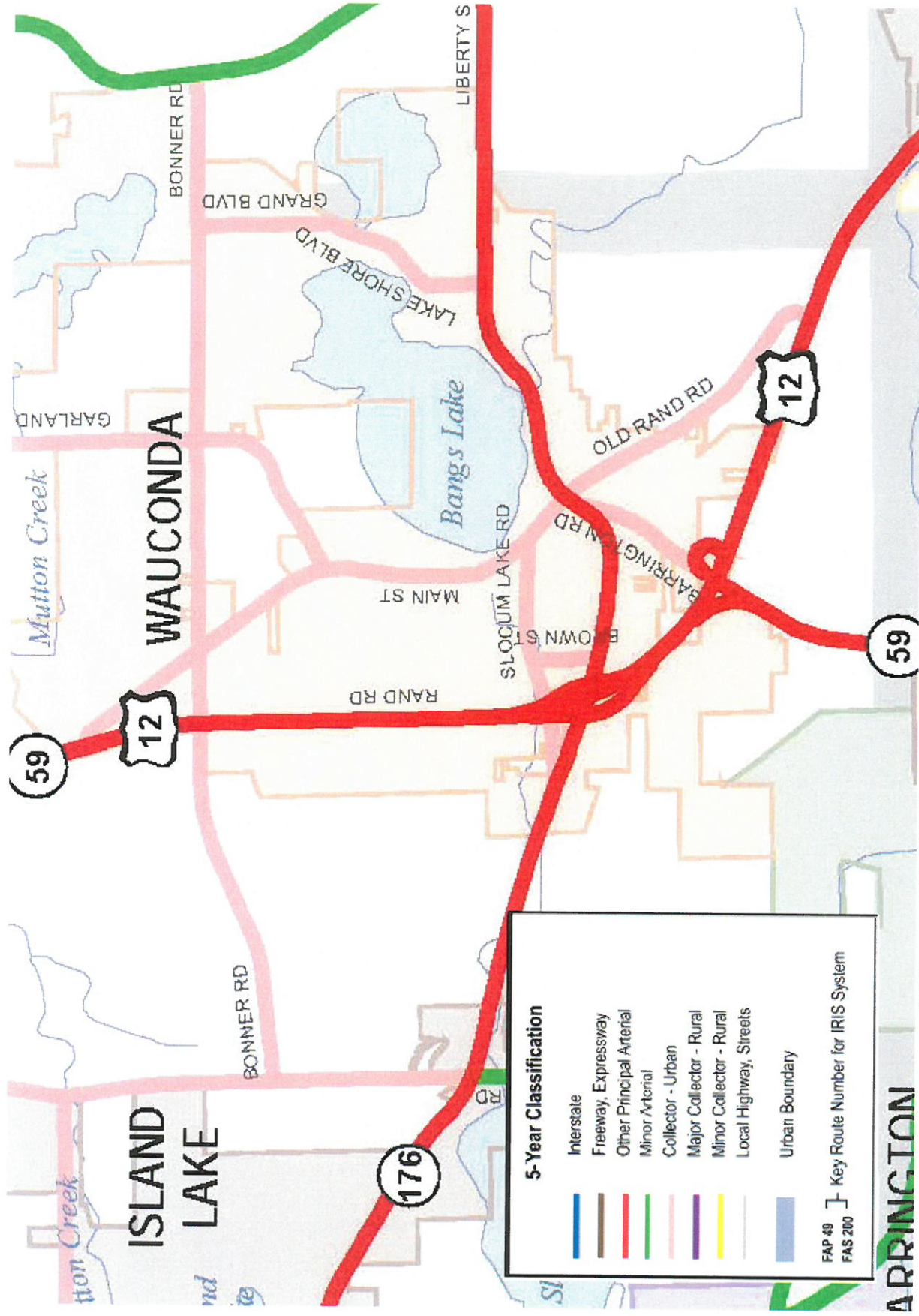
Discussion. This set of improvements would create a new gateway into the study area. Benefits include enhanced accessibility to the triangle development area and diverting some of the traffic at the IL 176 / US 12 interchange ramp intersections, which in turn will improve operations along the IL 176 corridor...

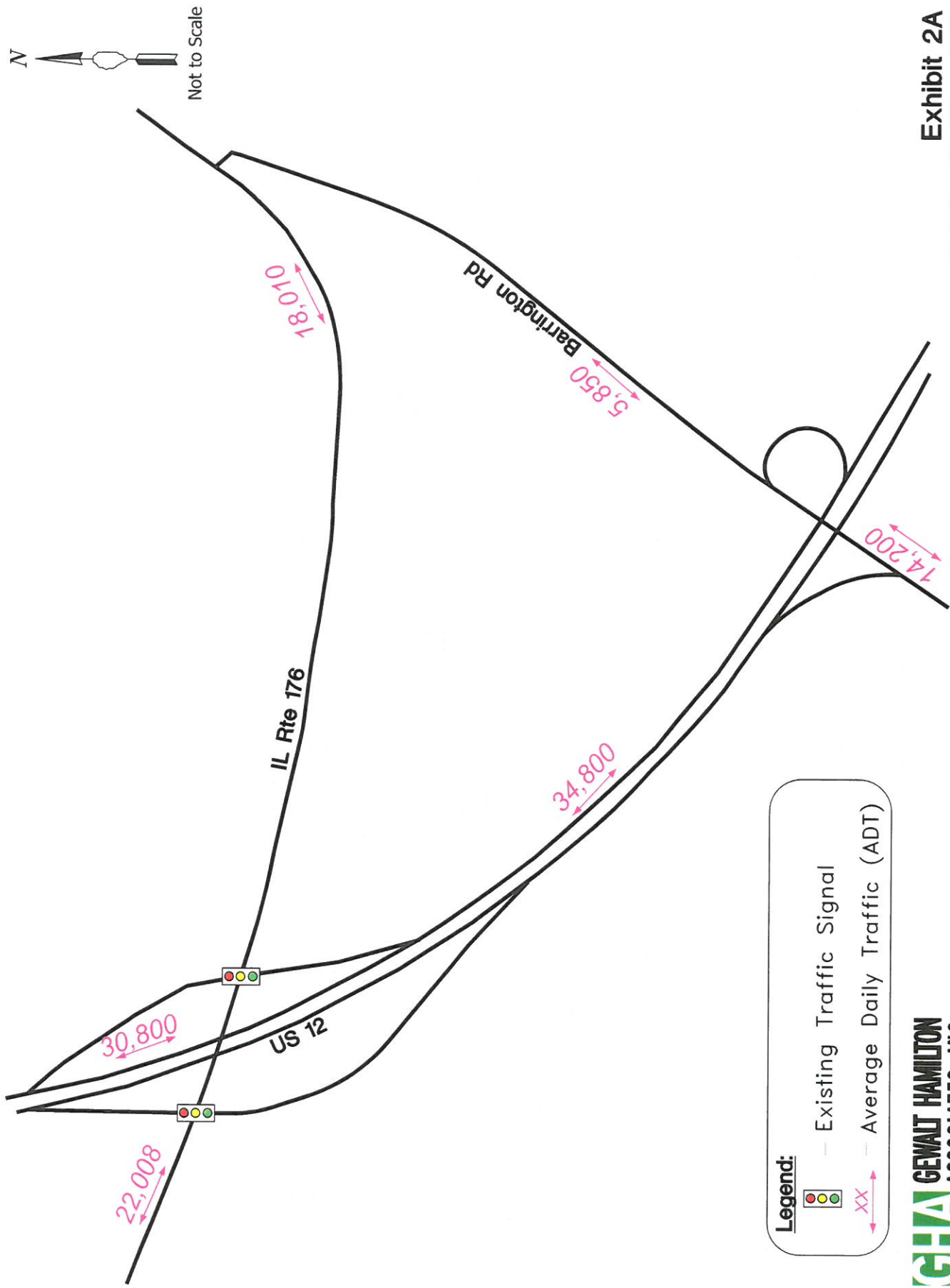
6. Eliminating traffic signals on IL 176 at the former Dominick's shopping center.
7. Access Management strategies along IL 176, such as consolidating existing drives and determining where new drives should be located.

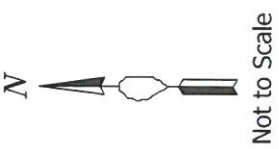
*Exhibit 8* illustrates the potential long range transportation issues and opportunities.

## EXHIBITS

1. Functional Classification
- 2A. Existing Average Daily Traffic (ADT)
- 2B. Existing Traffic Counts
3. Crash Data
4. Year 2040 Crash Data
5. Transportation Issues and Opportunities

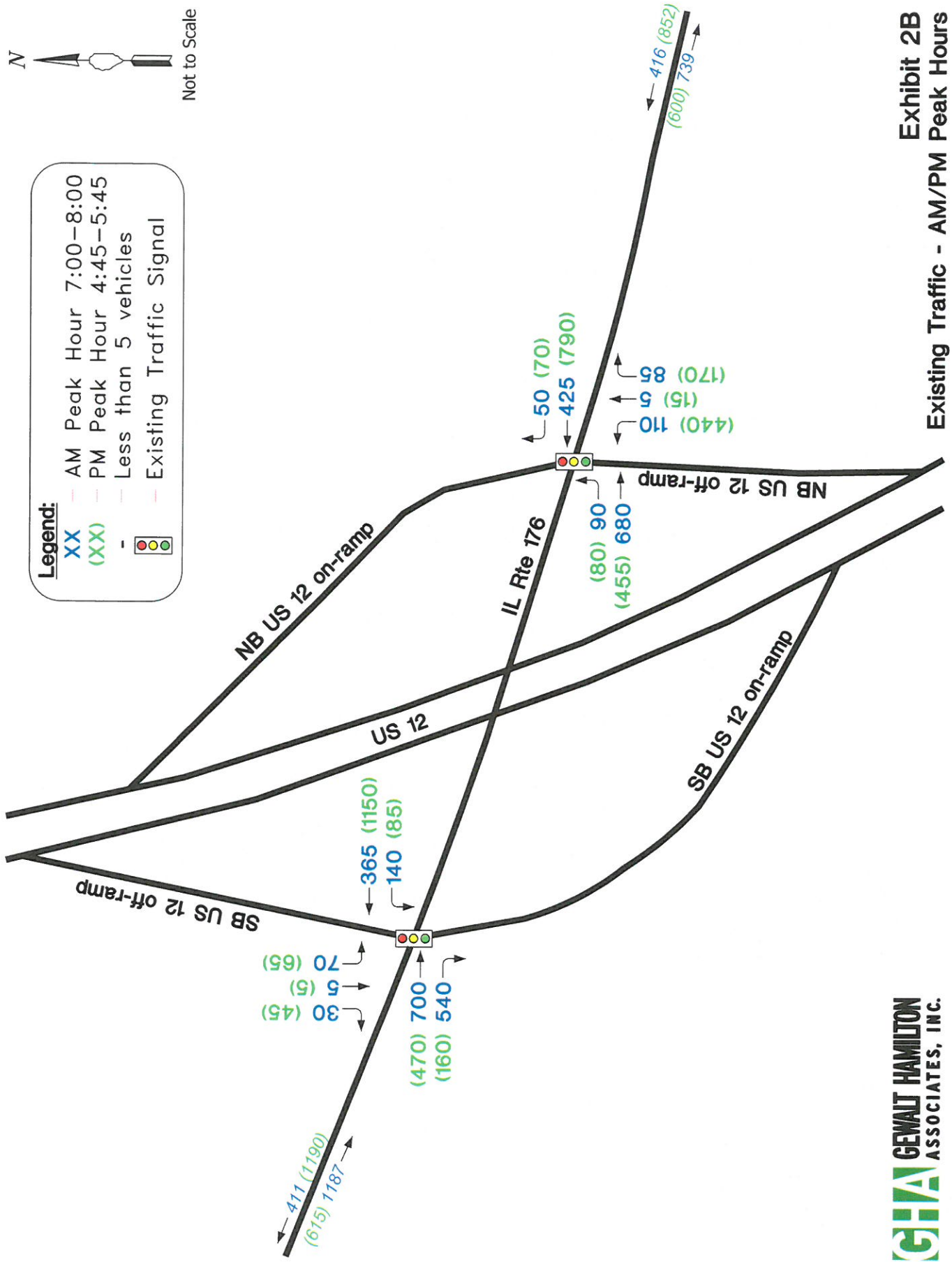






**Legend:**

- XX AM Peak Hour 7:00-8:00
- (XX) PM Peak Hour 4:45-5:45
- Less than 5 vehicles
- Existing Traffic Signal



**Exhibit 3 - 2010-2013 Crash Data**  
**Route 176 Corridor Study**  
**Wauconda, Illinois**

Intersection	Year	Property Damage	Personal Injury	Pedestrian	Fatality	Total
Route 12 South of 59	2010	0	0	0	0	0
	2011	0	0	0	0	0
	2012	2	0	0	0	2
	2013	0	0	0	0	0
	<b>Total:</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
Route 12 @ Route 59	2010	15	4	0	0	19
	2011	14	2	0	0	16
	2012	17	2	0	0	19
	2013	10	1	0	0	11
	<b>Total:</b>	<b>56</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>65</b>
Route 12 @ Route 176	2010	27	2	0	0	29
	2011	26	4	0	0	30
	2012	14	4	0	0	18
	2013	6	3	0	0	9
	<b>Total:</b>	<b>73</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>86</b>
Route 12 @ Solcum Lake	2010	3	0	0	0	3
	2011	2	0	0	0	2
	2012	0	0	0	0	0
	2013	0	0	0	0	0
	<b>Total:</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>
Route 176 West of Route 12	2010	1	0	0	0	1
	2011	1	0	0	0	1
	2012	3	0	0	0	3
	2013	1	0	0	0	1
	<b>Total:</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>

Route 176 @ Anderson St	2010	1	1	0	1	0	0	3
	2011	3	1	0	0	0	0	4
	2012	4	2	0	0	0	0	6
	2013	2	1	0	0	0	0	3
	<b>Total:</b>	<b>10</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>16</b>
Route 176 @ Bangs St	2010	4	0	0	0	0	0	4
	2011	0	0	0	0	0	0	0
	2012	1	0	0	1	0	0	2
	2013	0	0	0	0	0	0	0
	<b>Total:</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>6</b>
Route 176 @ Barrington Rd	2010	3	1	0	0	0	0	4
	2011	3	0	0	0	0	0	3
	2012	4	0	0	0	0	0	4
	2013	0	0	0	0	0	0	0
	<b>Total:</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>
Route 176 @ Brown	2010	16	1	0	0	0	0	17
	2011	7	3	0	0	0	0	10
	2012	18	1	0	0	0	0	19
	2013	3	0	0	0	0	0	3
	<b>Total:</b>	<b>44</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>49</b>
Route 176 @ Church St	2010	1	1	0	0	0	0	2
	2011	5	1	0	0	0	0	6
	2012	1	1	0	0	0	0	2
	2013	1	0	0	0	0	0	1
	<b>Total:</b>	<b>8</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>
Route 176 @ Larkdale	2010	9	0	0	0	0	0	9
	2011	10	0	0	0	0	0	10
	2012	5	2	0	0	0	0	7
	2013	4	0	0	0	0	0	4
	<b>Total:</b>	<b>28</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>

Route 176 @ Main Street	2010	11				1	0	0	0	12
	2011	7				0	0	0	0	7
	2012	6				1	0	0	0	7
	2013	4				1	0	0	0	5
	Total:	28				3	0	0	0	31
Route 176 @ Mill	2010	4				0	0	0	0	4
	2011	2				0	0	0	0	2
	2012	0				1	0	0	0	1
	2013	0				0	0	0	0	0
	Total:	6				1	0	0	0	7
Route 176 @ Maple	2010	0				0	0	0	0	0
	2011	1				0	0	0	0	1
	2012	0				0	0	0	0	0
	2013	0				0	0	0	0	0
	Total:	1				0	0	0	0	1
Route 176 @ Osage	2010	1				1	0	0	0	2
	2011	3				0	0	0	0	3
	2012	1				0	0	0	0	1
	2013	1				0	0	0	0	1
	Total:	6				1	0	0	0	7
Route 176 @ Thomas Ct	2010	1				1	0	0	0	2
	2011	5				0	0	0	0	5
	2012	3				1	0	0	0	4
	2013	1				0	0	0	0	1
	Total:	10				2	0	0	0	12
Barrington Rd @ Route 59	2010	4				1	0	0	0	5
	2011	0				0	0	0	0	0
	2012	0				0	0	0	0	0
	2013	0				0	0	0	0	0
	Total:	4				1	0	0	0	5

Barrington Rd @ Oak Grove	2010	1	0	0	0	0	0	1
	2011	0	0	0	0	0	0	0
	2012	0	0	0	0	0	0	0
	2013	0	0	0	0	0	0	0
	<b>Total:</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
Barrington Rd @ Oaks Ave	2010	1	0	0	0	0	0	1
	2011	0	0	0	0	0	0	0
	2012	0	0	0	0	0	0	0
	2013	2	0	0	0	0	0	2
	<b>Total:</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>

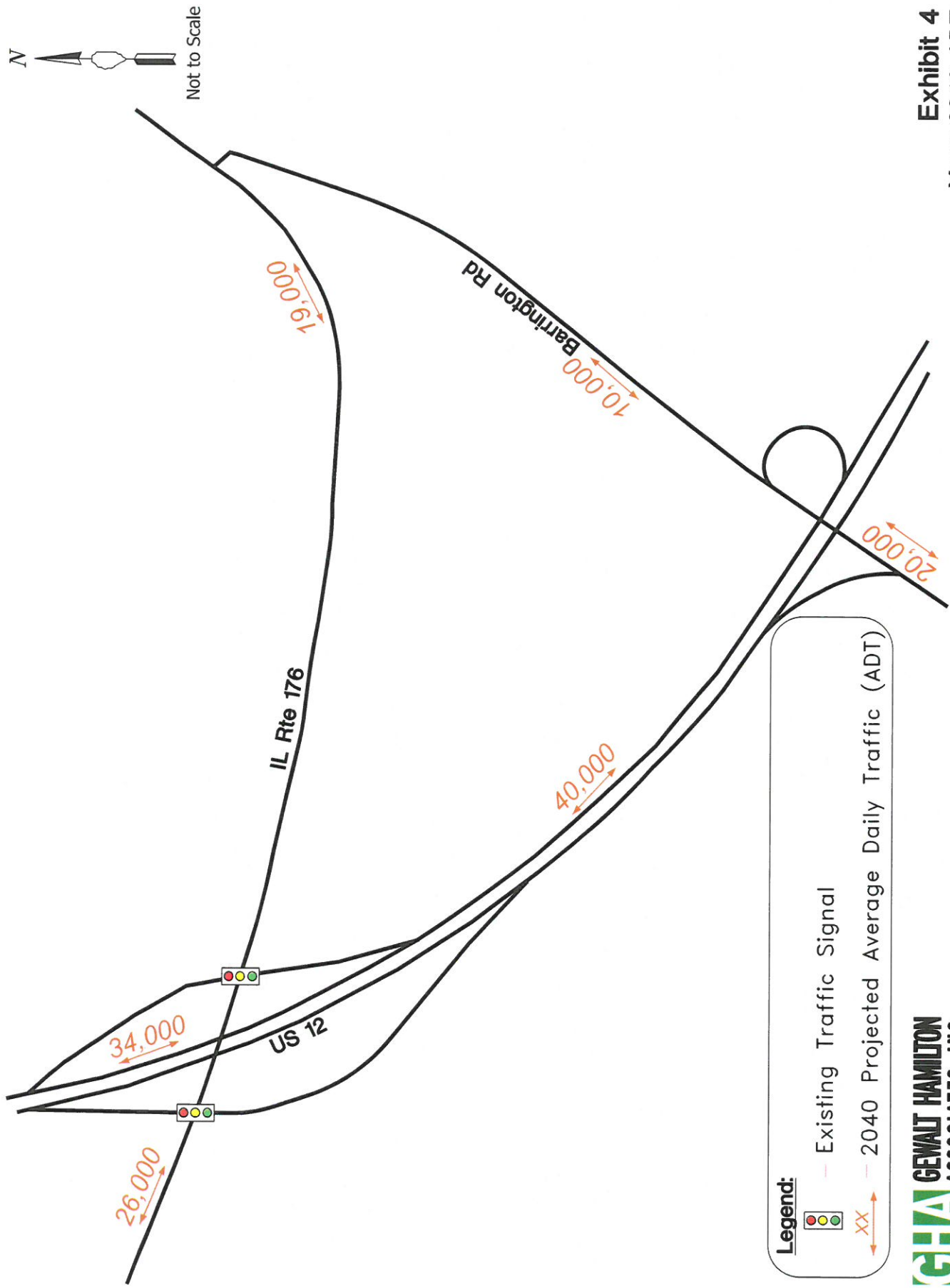


Exhibit 5

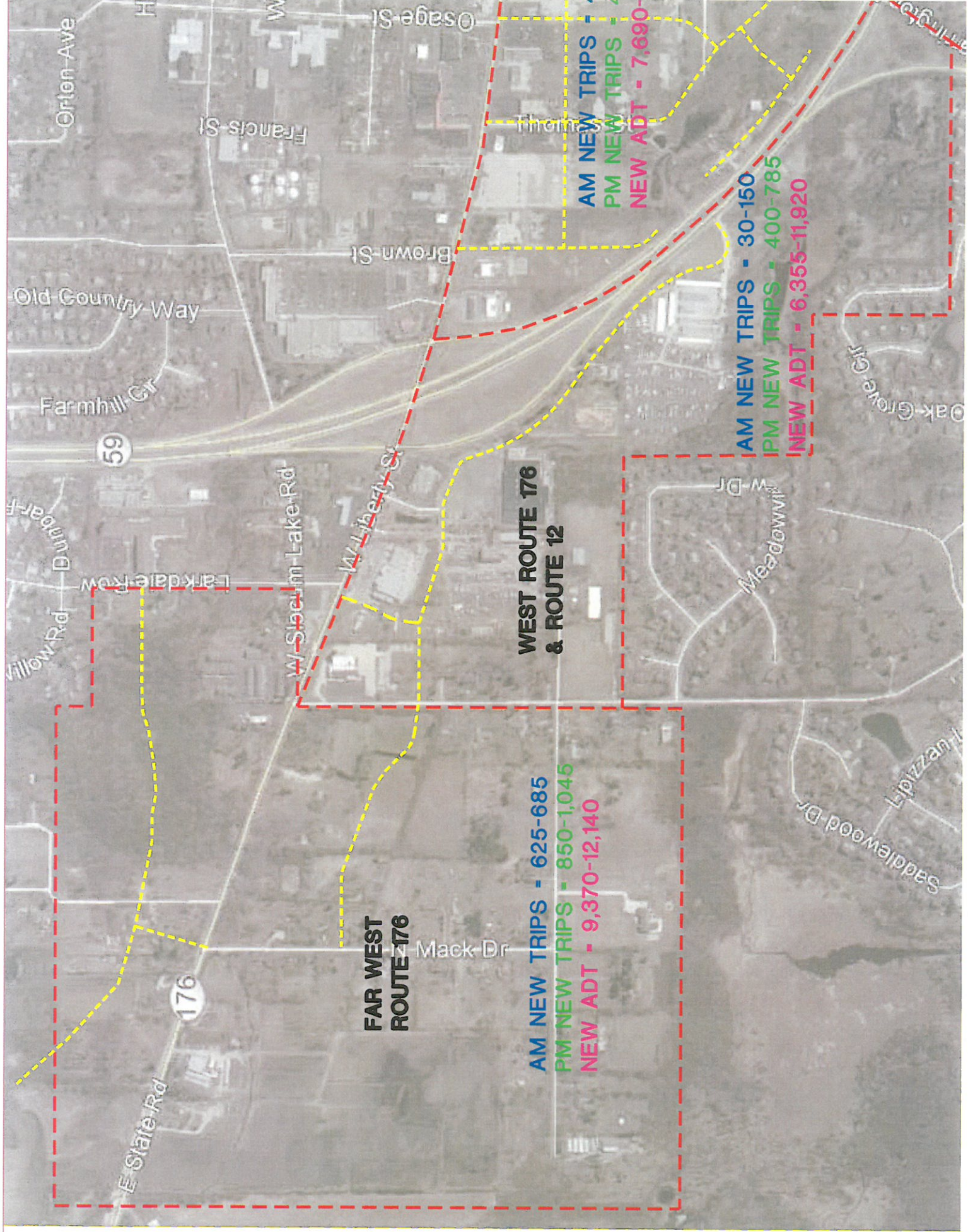
Future Land Use Trip Generation

Wauconda, Illinois

Sub-Area	Land Use	Sq Ft	AM Business Trips	PM Business Trips	DU	AM Residential Trips	PM Residential Trips	AM Total Trips
Far West Route 176	Moderate Density Residential	-	-	-	80	45	45	45
	Retail Business	136,300 - 227,200	-	370 - 620	0 - 260	0 - 115	0 - 135	0 - 115
	Employment/Industrial	531,300	535	480	-	-	-	535
	Mixed Use Business/Residential	61,400	-	170	50	25	30	25
	Single Family Residential	-	-	-	70	55	70	55
<b>Total:</b>		729,000 - 819,900	535	1,020 - 1,270	200 - 460	125 - 240	145 - 280	660 - 775
West Route 176 & Route 12	Moderate Density Residential	-	-	-	70	40	40	40
	Retail Business	272,700 - 454,400	-	740 - 1,235	0 - 530	0 - 235	0 - 275	0 - 235
	<b>Total:</b>	272,700 - 454,400	-	740 - 1,235	70 - 600	40 - 275	40 - 315	40 - 275
Triangle Area	Retail Business	260,200 - 430,900	-	705 - 1,170	0 - 500	0 - 220	0 - 260	0 - 220
	Mixed Use Business/Residential	59,100	-	160	50	25	30	25
	Healthcare and Rehab	81,200	-	-	175 beds	25	40	25
	<b>Total:</b>	400,500 - 571,200	-	865 - 1,330	50 - 550	50 - 270	70 - 330	50 - 270
South E Route 12	Retail Business	293,800 - 381,700	-	800 - 1,035	0 - 570	0 - 250	0 - 300	0 - 250
	Mixed Use Business/Residential	57,000	-	155	50	25	30	25
	<b>Total:</b>	350,800 - 438,700	-	955 - 1,190	50 - 620	25 - 275	30 - 330	25 - 275
<b>Overall Total:</b>							775 - 1,595	

(1) Total trips are all vehicle movements in and out of developments

(1) New trips are discounted based on internal capture and pass-by information provided by The Institute of Transportation Engineers



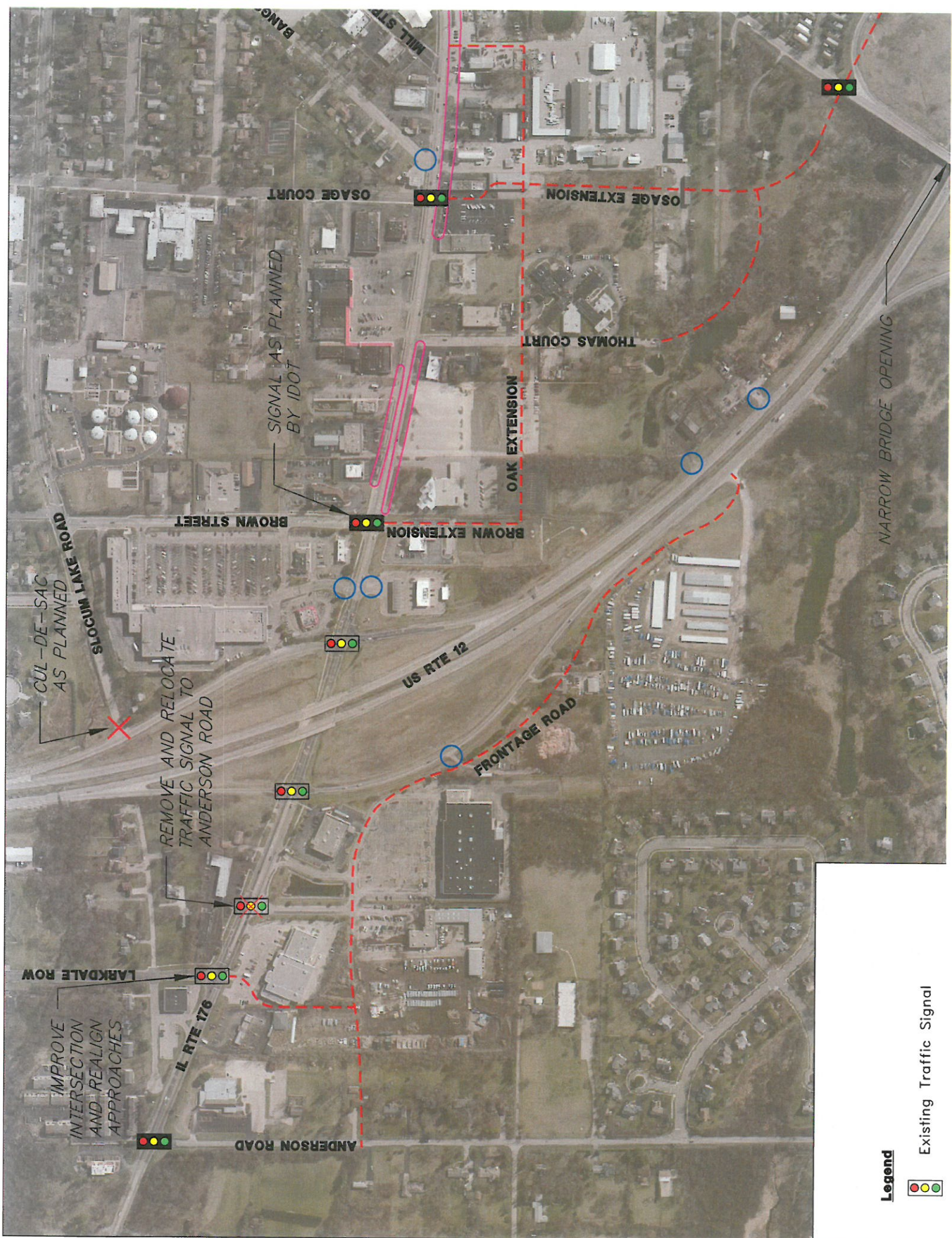
**FAR WEST  
ROUTE 176**

AM NEW TRIPS = 625-685  
PM NEW TRIPS = 850-1,045  
NEW ADT = 9,370-12,140

**WEST ROUTE 176  
& ROUTE 12**

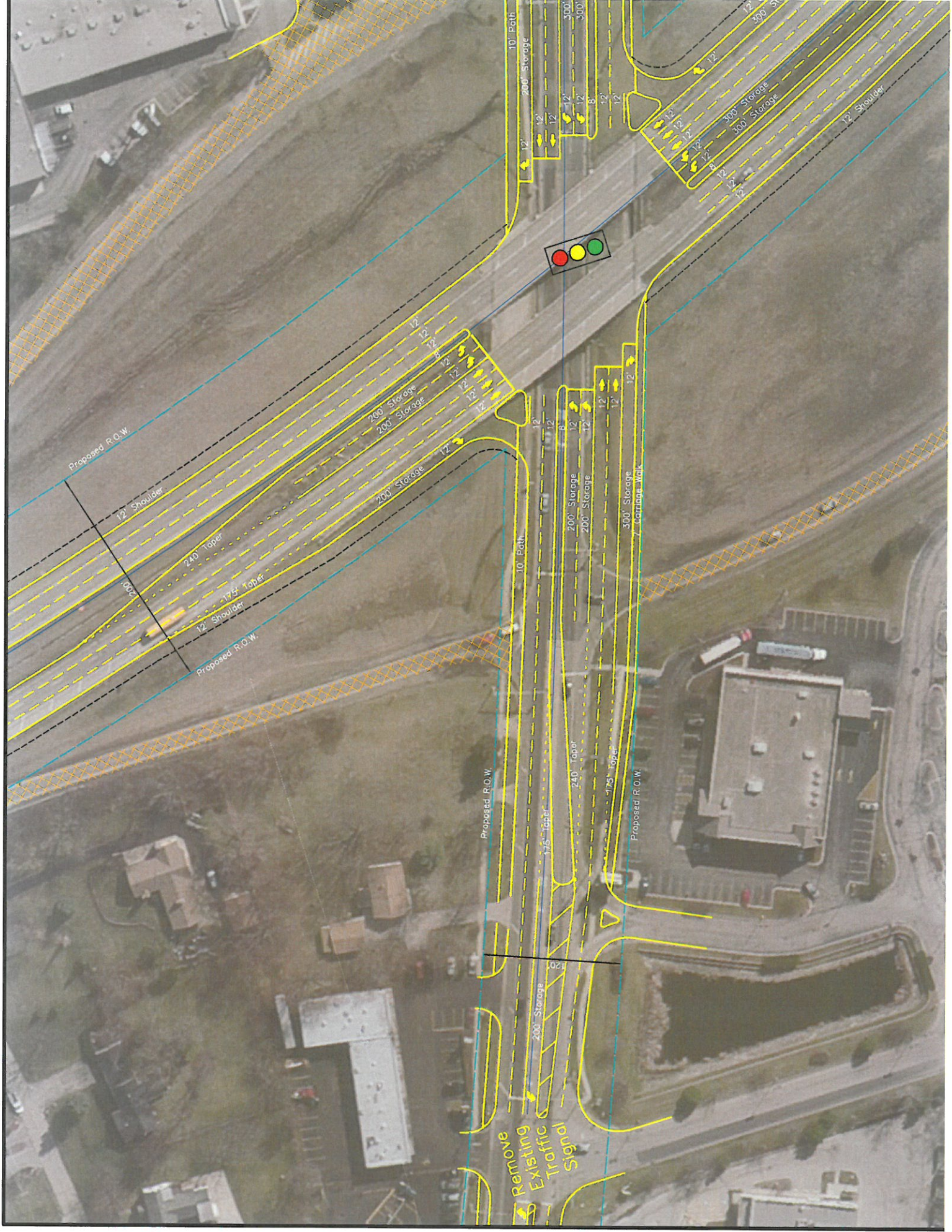
AM NEW TRIPS = 30-150  
PM NEW TRIPS = 400-785  
NEW ADT = 6,355-11,920

AM NEW TRIPS  
PM NEW TRIPS  
NEW ADT = 7,690-



**Legend**

Existing Traffic Signal



Proposed R.O.W.

12' Shoulder

240' Taper

175' Taper

12' Shoulder

Proposed R.O.W.

Proposed R.O.W.

Remove Existing Traffic Signal

200' Storage

240' Taper

Proposed R.O.W.

175' Taper

300' Storage

7' Carriageway

10' Path

200' Storage

300' Storage

300' Storage

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

12' Shoulder

# APPENDIX I

## CMAP YEAR 2040 RESPONSE LETTER



## Chicago Metropolitan Agency for Planning

233 South Wacker Drive  
Suite 800  
Chicago, Illinois 60606

312 454 0400  
[www.cmap.illinois.gov](http://www.cmap.illinois.gov)

October 2, 2013

Hon. Frank A. Bart  
Mayor  
Village of Wauconda  
101 North Main Street  
Wauconda, IL 60084

RECEIVED

OCT 03 2013

GEWALT HAMILTON  
ASSOCIATES, INC.

**Subject: IL 176 Corridor**  
Village of Wauconda

Dear Mayor Bart:

In response to a request made on your behalf and dated October 1, 2013, we have developed year 2040 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Year 2040 ADT
IL 176 west of US 12	26,000
IL 176 east of US 12	19,000
US 12/IL 59 north of IL 176	34,000
US 12/IL 59 south of IL 176	40,000
Barrington Rd south of IL 176	10,000
Barrington Rd/IL 59 south of US 12	20,000

Please be aware that the Illinois Department of Transportation has prepared Strategic Regional Arterial (SRA) reports for 3 routes: IL 176, US 12 (Rand Road) and IL 59. Reports include right-of-way, geometric, access, and transit recommendations. The executive summaries can be found at <http://www.cmap.illinois.gov/traffic/sra-resources> with other information about the SRA system.

Traffic projections are developed using existing ADT data provided in the request letter and the results from the April 2013 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2040 socioeconomic projections and assumes the implementation of the GO TO 2040 Comprehensive Regional Plan for the Northeastern Illinois area.

If you have any questions, please call Jose Rodriguez at (312) 386-8806.

Sincerely,

Donald P. Kopec  
Deputy Director for Planning and Programming

cc: Larson (Gewalt Hamilton Associates)  
S:\Projects\CMF\SATF\_Temp\_July2013\2013 Response\la-14-13.docx

## APPENDIX II

### FLORIDA DEPARTMENT OF TRANSPORTATION CAPACITY CHART

TABLE 1

Generalized Annual Average Daily Volumes for Florida's Urbanized Areas<sup>1</sup>

9/4/09

STATE SIGNALIZED ARTERIALS					
Class I (>0.00 to 1.99 signalized intersections per mile)					
Lanes	Median	B	C	D	E
2	Undivided	9,600	15,400	16,500	***
4	Divided	29,300	35,500	36,700	***
6	Divided	45,000	53,700	55,300	***
8	Divided	60,800	71,800	73,800	***
Class II (2.00 to 4.50 signalized intersections per mile)					
Lanes	Median	B	C	D	E
2	Undivided	**	10,500	15,200	16,200
4	Divided	**	25,000	33,200	35,100
6	Divided	**	39,000	50,300	53,100
8	Divided	**	53,100	67,300	70,900
Class III/IV (more than 4.5 signalized intersections per mile)					
Lanes	Median	B	C	D	E
2	Undivided	**	5,100	11,900	14,900
4	Divided	**	12,600	28,200	31,900
6	Divided	**	19,700	43,700	48,200
8	Divided	**	27,000	59,500	64,700

FREEWAYS					
Lanes	B	C	D	E	
4	43,500	59,800	73,600	79,400	
6	65,300	90,500	110,300	122,700	
8	87,000	120,100	146,500	166,000	
10	108,700	151,700	184,000	209,200	
12	149,300	202,100	238,600	252,500	
Freeway Adjustments					
	Auxiliary Lanes + 20,000	Ramp Metering + 5%	Oversaturated Conditions* -10% of E		

UNINTERRUPTED FLOW HIGHWAYS					
Lanes	Median	B	C	D	E
2	Undivided	7,800	15,600	22,200	27,900
4	Divided	34,300	49,600	64,300	72,800
6	Divided	51,500	74,400	96,400	109,400
Uninterrupted Flow Highway Adjustments					
Lanes	Median	Exclusive left lanes	Adjustment factors		
2	Divided	Yes	+5%		
Multi	Undivided	Yes	-5%		
Multi	Undivided	No	-25%		

Non-State Signalized Roadway Adjustments	
(Alter corresponding state volumes by the indicated percent.)	
Major City/County Roadways	- 10%
Other Signalized Roadways	- 35%

State & Non-State Signalized Roadway Adjustments					
(Alter corresponding state volumes by the indicated percent.)					
Divided/Undivided & Turn Lane Adjustments					
Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors	
2	Divided	Yes	No	+5%	
2	Undivided	No	No	-20%	
Multi	Undivided	Yes	No	-5%	
Multi	Undivided	No	No	-25%	
—	—	—	Yes	+ 15%	

BICYCLE MODE <sup>2</sup>					
(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)					
Paved Shoulder/ Bicycle Lane					
Coverage	B	C	D	E	
0-49%	**	3,200	12,100	>12,100	
50-84%	2,400	3,700	>3,700	***	
85-100%	6,300	>6,300	***	***	

PEDESTRIAN MODE <sup>2</sup>					
(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)					
Sidewalk Coverage					
	B	C	D	E	
0-49%	**	**	5,000	14,400	
50-84%	**	**	11,300	18,800	
85-100%	**	11,400	18,800	>18,800	

BUS MODE (Scheduled Fixed Route) <sup>3</sup>					
(Buses in peak hour in peak direction)					
Sidewalk Coverage					
	B	C	D	E	
0-84%	>5	≥4	≥3	≥2	
85-100%	>4	≥3	≥2	≥1	

<sup>1</sup> Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. Although presented as daily volumes, they actually represent peak hour direction conditions with applicable K and D factors applied. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual, Bicycle LOS Model, Pedestrian LOS Model and Transit Capacity and Quality of Service Manual, respectively for the automobile/truck, bicycle, pedestrian and bus modes.

<sup>2</sup> Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

<sup>3</sup> Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

\* For oversaturated conditions during peak hour, subtract 10% from the LOS E (capacity volumes). This number becomes the new maximum service volume for LOS D, and LOS E cannot be achieved.

\*\* Cannot be achieved using table input value defaults.

\*\*\* Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:  
Florida Department of Transportation  
Systems Planning Office  
605 Suwannee Street, MS 19  
Tallahassee, FL 32399-0450

<sup>1</sup> Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. Although presented as daily volumes, they actually represent peak hour direction conditions with applicable K and D factors applied. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual, Bicycle LOS Model, Pedestrian LOS Model and Transit Capacity and Quality of Service Manual, respectively for the automobile/truck, bicycle, pedestrian and bus modes.

<sup>2</sup> Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

<sup>3</sup> Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

\* For oversaturated conditions during peak hour, subtract 10% from the LOS E (capacity volumes). This number becomes the new maximum service volume for LOS D, and LOS E cannot be achieved.

\*\* Cannot be achieved using table input value defaults.

\*\*\* Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:

Florida Department of Transportation  
Systems Planning Office  
605 Suwannee Street, MS 19  
Tallahassee, FL 32399-0450

## **APPENDIX III**

### **EXISTING CONDITIONS PHOTO INVENTORY**



Looking north at existing traffic signal at Dominik's entrance



Looking north along Anderson Road at northern businesses



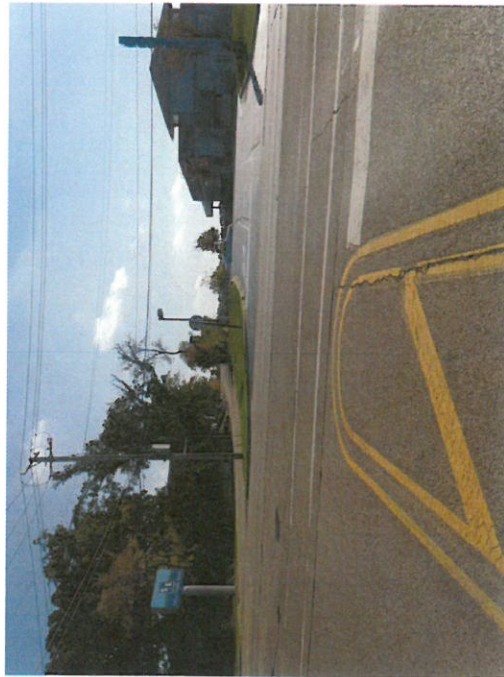
Looking north along Anderson Road at proposed signal location



Looking south along Brown Street at proposed signal location



Looking south across IL 176 from Brown Street



Looking north to potential US 12 ramp location



Looking southwest towards IL 176



Looking west along IL 176 to existing US 12 Ramp